

What is claimed is:

- 1 1. A method comprising:
2 receiving a signal indicating a modulated symbol during a given time slice of the
3 signal;
4 performing sliding window frequency transformations of the signal, each sliding
5 window transformation being associated with a different time interval of the signal;
6 selecting one of the time intervals to correspond to said time slice; and
7 using the result of the frequency transformation associated with the selected time
8 interval to obtain an indication of the demodulated symbol.
- 1 2. The method of claim 1, wherein the selecting comprises:
2 correlating the sliding window transformations with a first pilot code;
3 correlating the sliding window transformations with a second pilot code; and
4 comparing the results of the correlations with the first and second pilot codes to select
5 said one of the time intervals.
- 1 3. The method of claim 2, wherein
2 the first pilot code is associated with the symbol, and
3 the second pilot code is associated with another symbol adjacent to the first symbol in
4 time.
- 1 4. The method of claim 2, wherein the comparing the results of the correlations
2 comprises:
3 finding a time interval between where the correlations peak.
- 1 5. The method of claim 1, wherein the performing the sliding window
2 transformations comprises:
3 for each transformation, adding at least one additional sample of the signal to the
4 transformation as compared to a previous transformation and removing at least one sample
5 used in the previous transformation.

1 6. The method of claim 1, wherein performing the sliding window frequency
2 transformations comprises:
3 sampling the signal to produce samples at different points in time;
4 creating a window to select a predetermined number of the samples within the time
5 interval associated with the sliding window transformation; and
6 performing one of the sliding window transformations for each window.

1 7. The method of claim 6, wherein performing each sliding window
2 transformation comprises:
3 advancing the window in time before performing the next sliding window
4 transformation.

1 8. The method of claim 7, wherein the advancing comprises:
2 advancing the window in time by a predetermined number of sampling periods.

1 9. The method of claim 1, wherein the signal comprises an Orthogonal
2 Frequency Division Multiplexing signal.

1 10. A method comprising:
2 generating a modulated signal, the signal comprising a first modulated symbol and a
3 second modulated symbol adjacent to the first modulated symbol in time;
4 scrambling first pilot tones associated with the first modulated symbol with a first
5 pilot tone; and
6 scrambling second pilot tones associated with the second modulated symbol with a
7 second pilot tone to indicate a time interval in which to demodulate the first modulated
8 symbol from the signal.

1 11. The method of claim 10, wherein the modulated signal comprises an
2 Orthogonal Frequency Division Multiplexing signal.

12. The method of claim 10, further comprising:
transmitting the modulated signal.

13. A method comprising:
receiving a signal containing a modulated symbol;
performing frequency transformations of the signal;
correlating the frequency transformations with a first pilot code;
correlating the frequency transformations with a second pilot code; and
comparing the results of the correlations with the first and second pilot codes to select
one of the frequency transformations to obtain an indication of the demodulated symbol.

14. The method of claim 13, wherein
the first pilot code is associated with the symbol, and
the second pilot code is associated with another symbol adjacent to the first symbol in
time.

15. The method of claim 13, wherein the comparing of the results of the
correlations comprises:
finding a time interval between where the correlations peak.

16. The method of claim 13, wherein the signal comprises an Orthogonal
Frequency Division Multiplexing signal.

17. A receiver comprising:
circuitry to receive a signal indicating a modulated signal associated with a given time
slice of the signal; and
an engine to:
perform sliding window frequency transformations of the signal, each sliding
window transformation being associated with a different time interval of the signal;
select one of the time intervals to correspond to said given period of time; and
use the result of the frequency transformation associated with the selected time

9 interval to obtain an indication of the demodulated symbol.

1 18. The system of claim 17, wherein
2 the engine correlates the sliding window transformations with a first pilot code,
3 correlates the sliding window transformations with a second pilot code, and
4 compares the results of the correlations with the first and second pilot codes to select
5 said one of the time intervals.

1 19. The system of claim 18, wherein
2 the first pilot code is associated with the symbol, and
3 the second pilot code is associated with another symbol adjacent to the first symbol in
4 time.

1 20. The system of claim 18, wherein the engine compares the results of the
2 correlations by finding a time interval between where the correlations peak.

1 21. The system of claim 17 wherein the engine performs the sliding window
2 transformations by for each transformation, adding at least one additional sample of the
3 signal to the transformation as compared to a previous transformation and removing at least
4 one sample used in the previous transformation.

1 22. The system of claim 17, wherein the engine samples the signal to produce
2 samples at different points in time and creates a window to select a predetermined number of
3 the samples within the time interval associated with the sliding window transformation.

1 23. The system of claim 22, wherein the engine advances the window in time
2 before performing the next sliding window transformation.

1 24. The system of claim 23, wherein the engine advances the window in time by
2 one sampling period.

1 25. The system of claim 17, wherein the signal comprises an Orthogonal
2 Frequency Division Multiplexing signal.

1 26. A apparatus comprising:
2 circuitry to receive a signal containing a modulated symbol; and
3 an engine to:
4 perform frequency transformations of the signal,
5 correlate the frequency transformations with a first pilot code,
6 correlate the frequency transformations with a second pilot code, and
7 compare the results of the correlations with the first and second pilot codes to
8 select one of the frequency transformations to obtain an indication of the demodulated
9 symbol.

1 27. The apparatus of claim 26, wherein
2 the first pilot code is associated with the symbol, and
3 the second pilot code is associated with another symbol adjacent to the first symbol in
4 time.

1 28. The apparatus of claim 26, wherein the engine finds a time interval between
2 where the correlations peak to select one of the frequency transformations.

1 29. The apparatus of claim 26, wherein the signal comprises an Orthogonal
2 Frequency Division Multiplexing signal.